UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Ms. Ellen Gilinsky, Ph.D., Director
Water Quality Division
Virginia Department of Environmental Quality
629 Main Street
Richmond, VA 23219

Dear Ms. Gilinsky:

The U. S. Environmental Protection Agency (EPA) Region III is pleased to approve the Total Maximum Daily Load (TMDL) for the primary contact use (bacteria) impairments on London Bridge Creek, Nawney Creek, Milldam and West Neck Creek (Virginia Beach Coastal Area). The TMDL Report was submitted to EPA for review in May 2005. The TMDLs were established and submitted in accordance with Section 303(d)(1)(c) and (2) of the Clean Water Act to address impairments of water quality as identified in Virginia=s 1998 Section 303(d) list.

In accordance with Federal regulations at 40 CFR '130.7, a TMDL must comply with the following requirements: (1) designed to attain and maintain the applicable water quality standards, (2) include a total allowable loading and as appropriate, wasteload allocations (WLAs) for point sources and load allocations for nonpoint sources, (3) consider the impacts of background pollutant contributions, (4) take critical stream conditions into account (the conditions when water quality is most likely to be violated), (5) consider seasonal variations,
(6) include a margin of safety (which accounts for uncertainties in the relationship between pollutant loads and instream water quality), (7) consider reasonable assurance that the TMDL can be met, and (8) be subject to public participation. The enclosure to this letter describes how the TMDLs for the primary contact use impairments satisfy each of these requirements.

As you know, all new or revised National Pollutant Discharge Elimination System permits must be consistent with the TMDL WLA pursuant to 40 CFR '122.44 (d)(1)(vii)(B). Please submit all such permits to EPA for review as per EPA=s letter dated October 1, 1998.

If you have any questions or comments concerning this letter, please don't hesitate to contact Mr. Thomas Henry at (215) 814-5752.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure

Decision Rationale

Total Maximum Daily Loads for
The Primary Contact Use (Bacteriological) Impairments on
Virginia Beach Coastal Areas

I. Introduction

The Clean Water Act (CWA) requires a Total Maximum Daily Load (TMDL) be developed for those water bodies identified as impaired by a state where technology-based and other controls will not provide for attainment of water quality standards. A TMDL is a determination of the amount of a pollutant from point, nonpoint, and natural background sources, including a margin of safety (MOS), that may be discharged to a water quality-limited water body.

This document will set forth the Environmental Protection Agency=s (EPA) rationale for approving the TMDLs for the primary contact use (bacteriological) impairments on Virginia Beach Coastal Areas (London Bridge Creek and Canal #2, Milldam Creek, Nawney Creek (Upper and Lower) and West Neck Creek (Middle and Upper). EPA=s rationale is based on the determination that the TMDLs meet the following eight regulatory conditions pursuant to
40 CFR '130.

1) The TMDLs are designed to implement applicable water quality standards.
2) The TMDL include a total allowable load as well as individual waste load allocations (WLAs) and load allocations(LAs).
3) The TMDLs consider the impacts of background pollutant contributions.
4) The TMDLs consider critical environmental conditions.
5) The TMDLs consider seasonal environmental variations.
6) The TMDLs include a MOS.
7) There is reasonable assurance that the TMDLs can be met.
8) The TMDLs have been subject to public participation.

II. Background

The impaired segments included in the Virginia Beach Coastal Area are located in the Lynnhaven-Poquson and Ablemarle Watersheds in southeastern Virginia. The watersheds are all small tidally influenced segments. Table 1 shows the total acreage for each watershed and four of the major landuse categories.

Table #1 - Landuses in Virginia Beach Coastal Area Watersheds

Stream	Total (Acres)	Woodland (Acres)	Developed (Acres)	Agriculture (Acres)	Wetlands (Acres)
London Bridge Creek	5,851	637	3,411	533	419
Milldam Creek	2,464	140	0	689	1,513
Nawney Creek	4,758	202	174	3,123	1,063
West Neck Creek (Middle)	3,345	446	31	1,637	1,106
West Neck Creek (Upper)	11,098	1,279	4,373	2,252	2,166

In response to Section 303(d) of the CWA, the Virginia Department of Environmental Quality (VADEQ) listed several waters in the Lynnhaven and Ablemarle Watersheds on Virginia=s Section 303(d) lists as being unable to attain their applicable criteria. Table 2 documents the impairments and year of initial listing for each listed segment. The decision to list for bacteria (fecal coliform) was based on observed violations of the Commonwealth=s bacteriological criteria. At the time of its listing, the bacteria criteria used fecal coliform as an indicator species and had an instantaneous standard 1,000 colony forming units (cfu) per 100 milliliters (ml) and geometric mean standard of 200 cfu/100 ml. This decision rationale will address the TMDLs for the impairments of the primary contact use. Additional TMDLs are required to address the dissolved oxygen impairments.

Table #2 – Virginia Beach Coastal Area TMDL Impairments

Segment	Stream Name	Initial Listing	Impairments
VAT-C08E-05	London Bridge Creek and Canal #2	1998	DO, Fecal Coliform
VAT-K41R-02	Milldam Creek	2002	DO, Fecal Coliform
VAT-K42E-01	Nawney Creek (Upper)	1996	DO, Fecal Coliform
VAT-K42E-02	Nawney Creek (Lower)	1996	Fecal Coliform
VAT-K41R-05	West Neck Creek (Middle)	1998	DO, Chloride, Fecal Coliform
VAT-C08E-07	West Neck Creek (Upper)	1996	DO, Fecal Coliform

Fecal coliform is a bacterium which can be found within the intestinal tract of all warm blooded animals. Therefore, fecal coliform can be found in the fecal wastes of all warm blooded animals. Fecal coliform in itself is not a pathogenic organism. However, fecal coliform indicates the presence of fecal wastes and the potential for the existence of other pathogenic bacteria. The higher concentrations of fecal coliform indicate the elevated likelihood of increased pathogenic organisms.

EPA encouraged the states to use e-coli and enterococci as the indicator species instead of fecal coliform. A better correlation was drawn between the concentrations of e-coli and enterococci,

and the incidence of gastrointestinal illness. The Commonwealth adopted e-coli and enterococci criteria in January 2003. According to the new criteria, streams will be evaluated via the e-coli and enterococci criteria after 12 samples have been collected using these indicator species. The fecal coliform criteria will be used in the interim. Twelve e-coli samples were collected from these tributaries and they are therefore assessed according to the new criteria.

As Virginia designates all of its waters for primary contact, all waters were required to meet the bacteriological standard for primary contact. Virginia=s standard applies for all flows, there are no high or low flow exemptions. The fecal coliform criteria was modified in 2003 to require that the fecal coliform concentration not exceed a geometric mean of 200 cfu per 100 ml of water for two or more samples collected over a month, nor shall more than 10 percent of the total samples exceed 400 cfu/100 ml of water. The new criteria also established concentration based requirements for e-coli. The e-coli criteria requires a geometric mean concentration of 126 cfu/100 ml of water with no sample exceeding 235 cfu/100 ml of water. Unlike the fecal coliform criteria, which allows a 10 percent violation rate, the new e-coli criteria requires the concentration of e-coli not exceed 235 cfu/100 ml of water. This caps the allowable concentration of bacteria and requires extremely stringent load reductions for attainment. The enterococci criterion is a geometric mean of 35 cfu/100 ml and an instantaneous maximum of 104 cfu/100 ml. The enterococci criterion applies to saltwater and the transition zone.

Although the TMDL and criteria require the 235 cfu/100 ml of water and 104 cfu/100 ml of water for e-coli and enterococci not be exceeded, waters are not placed on the Section 303(d) list if their violation rate does not exceed 10 percent. Therefore, these tributaries may be deemed as attaining the primary contact use prior to the implementation of all of their TMDL reductions. It is necessary to keep this in mind because of the reductions required to attain the instantaneous criteria for e-coli in the model. The geometric mean criterion seems to be more rigorous for the waters that are subjected to the enterococci criterion.

The TMDL submitted by Virginia is designed to determine the acceptable load of e-coli which can be delivered to the impaired waters, as demonstrated by the use of the Hydrologic Program Fortran (HSPF)[1] and the CE-QUAL-W2 models, in order to ensure that the water quality standard is attained and maintained. HSPF was considered an appropriate model to provide the runoff inputs to a suitable tidal model such as CE-QUAL-W2 which was then used to combine these inputs and the parameters associated with tidal processes. The CE-QUAL-W2 model has the ability to simulate time varying point and nonpoint sources, wind, tides and a first order decay rate. The watersheds analyzed in the Virginia Beach Coastal Area TMDL were all influenced by wind. The models were run to determine

[1]Bicknell, B.R., J.C. Imhoff, J.L. Little, and R.C. Johanson. 1993. Hydrologic Simulation Program-FORTRAN (HSPF): User=s Manual for release 10.0. EPA 600/3-84-066. U.S. Environmental Protection Agency, Environmental Research Laboratory, Athens, GA.

the fecal coliform loading to the impaired tributaries as most of the loading information and sampling results are based on fecal coliform. The in-stream fecal coliform concentrations were then converted to e-coli or enterococci using a conversion factor established by the Commonwealth.

The TMDL analysis allocates the application/deposition of fecal coliform to land based and instream sources. For land based sources, the HSPF model accounts for the buildup and washoff of pollutants from these areas. Buildup (accumulation) refers to the complex spectrum of dry-weather processes that deposit or remove (die-off) pollutants between storms.[2] Washoff is the removal of fecal coliform which occurs as a result of runoff associated with storm events. These two processes allow the HSPF model to determine the amount of fecal coliform from land based sources which is reaching the stream. Point sources and wastes deposited directly to the stream were treated as direct deposits. Wastes which are deposited directly to the stream do not need a transport mechanism. The loadings determined by HSPF were then applied to the
CE-QUAL-W2 model. Local rainfall and temperature data were needed to develop the model. Weather data provides the precipitation data which drives the TMDL model. Weather data was collected from National Climatic Data Center weather stations within the watersheds.

Stream flow data was available from United States Geological Survey (USGS) gage 02043200 on West Neck Creek. This allowed the modelers to calibrate and validate the hydrologic model to observed flow data within the watersheds. As mentioned earlier these the flows in these waters are wind influenced. Therefore, it was necessary to have accurate tidal height, wind, precipitation and runoff data. A USGS study at the West Neck Creek gage was conducted from 1998 through 1999. The data obtained from this study was used to calibrate and validate the TMDL model. Usually, a longer data window is used for model development. However, this was the must complete data set, and therefore, used for model development. The TMDL models for the other waters used West Neck Creek as a paired watershed to generate surface characteristics for hydrology. The TMDLs were modeled using fecal coliform loading rates as was done in previous TMDL efforts. The fecal coliform concentrations were then converted to e-coli or enterococci concentrations using a translator equations developed by VADEQ. Significant reductions in the modeled load were required in order for the tributaries to attain the e-coli criteria in the model. More stringent reductions were required to meet the instantaneous standard than the geometric mean for those streams subjected to the e-coli criteria. The reverse held for waters subjected to the enterococci criteria. Table 3 documents the TMDL loading for each tributary.

Table #3 - Summarizes the Specific Elements of the TMDLs.

Stream Name	Parameter	TMDL (cfu/yr)	WLA (cfu/yr)	LA (cfu/yr)	MOS
London Creek Bridge	Enterococci	2.33E+13	2.17E+13	1.62E+12	Implicit

[2]CH2MHILL, 2000. Fecal Coliform TMDL Development for Cedar, Hall, Byers, and Hutton Creeks Virginia,

Nawney Creek	Enterococci	5.09E+12	0.00	5.09E+12	Implicit
Milldam Creek	E-coli	3.86E+12	0.00	3.86E+12	Implicit
West Neck Creek (Middle)	E-coli	3.33E+13	0.00	3.33E+13	Implicit
West Neck Creek (Upper)	Enterococci	2.11E+13	1.88E+13	2.33E+12	Implicit

The United States Fish and Wildlife Service has been provided with copy of these TMDLs.

III. Discussion of Regulatory Conditions

EPA finds that Virginia has provided sufficient information to meet all of the eight basic requirements for establishing a primary contact (bacteriological) impairment TMDLs for the London Bridge Creek, Nawney Creek, Milldam and West Neck Creek Watersheds. EPA is therefore approving these TMDLs. EPA=s approval is outlined according to the regulatory requirements listed below.

1) The TMDLs are designed to meet the applicable water quality standards.

Virginia has indicated that excessive levels of fecal coliform due to nonpoint sources (both wet weather and directly deposited nonpoint sources) have caused violations of the water quality criteria and designated uses on London Bridge Creek, Nawney Creek, Milldam and West Neck Creek. The water quality criterion for fecal coliform was a geometric mean 200 cfu/100 ml or an instantaneous standard of no more than 1,000 cfu/100 ml. Two or more samples over a thirty-day period are required for the geometric mean standard. Since the state rarely collects more than one sample over a thirty-day period, most of the samples were measured against the instantaneous standard. According to the 2004 Section 303(d) list, the violation rate for the waters was between 15 and 80 percent.

The Commonwealth has changed its bacteriological criteria as indicated above. The new criteria require that the fecal coliform concentration not exceed a geometric mean of 200 cfu per 100 ml of water for two or more samples collected over a month nor shall more than 10 percent of the total samples exceed 400 cfu/100 ml of water. The new e-coli criteria requires a geometric mean of 126 cfu/100 ml of water with no sample exceeding 235 cfu/100 ml of water.

The HSPF and CE-QUAL-W2 models were used to determine the fecal coliform deposition rates to the land as well as loadings to the stream from direct deposit sources. Once the existing load was determined, allocations were assigned to each source category to develop a loading pattern that would allow London Bridge Creek, Nawney Creek, Milldam and West Neck Creek to support the e-coli water quality criterion and primary contact use. The following discussion is intended to describe how controls on the loading of e-coli to these waters will ensure that the criterion is attained.

The TMDL modelers determined the fecal coliform production rates within the watershed.

Data used in the model was obtained from a wide array of sources, including farm practices in the area, the amount and concentration of farm animals, animal access to the stream, manure application rates, wildlife in the watershed, wildlife fecal production rates, landuses,

weather, stream geometry, etc.. The model combined all of the data to determine the hydrology and water quality of the stream.

The lands within the watersheds were categorized into specific landuses. The landuses had specific loading rates and characteristics that were defined by the modelers. Therefore, the loading rates are different in lands defined as forested versus pasture. Pasture lands support cattle and are influenced differently by stormwater runoff.

The London Bridge Creek, Nawney Creek, Milldam and West Neck Creek TMDL models were run using weather data collected from area weather stations. This data was used to determine the precipitation rates in the watersheds which transport the on land pollutants to the streams through overland and groundwater flows. Waste that was deposited to the land or stored was subjected to a die-off rate. The longer fecal coliform stayed on the ground the greater the die-off was. Materials that were washed off the surface shortly after deposition were subjected to less die-off.

As stated above the model for the West Neck Creek TMDL was calibrated and validated to USGS gage data collected within the watershed. The gage data used for calibration and validation was collected from 1998 through 1998. The TMDL models for the other waters used West Neck Creek as a paired watershed to generate surface characteristics for hydrology. The water quality calibration for the TMDL models was conducted against data collected from February 1998 though December 1999.

2) The TMDLs include a total allowable load as well as individual waste load allocations and load allocations.

Total Allowable Loads

Virginia indicates that the total allowable loading is the sum of the loads allocated to land based precipitation driven nonpoint source areas (forest and agricultural land segments) and point sources. Activities that increase the levels of bacteria to the land surface or their availability to runoff are considered flux sources. The actual value for total loading can be found in Table 3 of this document. The total allowable load is calculated on an annual basis.

Waste Load Allocations

EPA regulations require that an approvable TMDL include individual WLAs for each point source. According to 40 CFR § 122.44(d)(1)(vii)(B), AEffluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA pursuant to 40 CFR § 130.7.@ Furthermore, EPA has authority to object to the issuance of any National Pollutant Discharge Elimination System (NPDES) permit that is inconsistent with the WLAs

established for that point source. Virginia has stated that there are two regulated point sources discharging bacteria within the London Bridge Creek, Nawney Creek, Milldam and West Neck Creek Watersheds. The WLA for these facilities can be found in Table 4. Both of these facilities are municipal separate stormwater sewer systems (MS-4s). Unlike traditional point sources MS-4s operate similar to nonpoint sources by discharging stormwater into surface waters. In allocating their WLA, loads were based on each permittee's share of the contributing area of impairment. The load for these permittees was modeled as the load from impervious surfaces within the boundaries covered by the MS-4 falling within the bounds of the impairment. Reductions to the nonpoint source load were applied regardless of the existence of the MS-4.

Table #4 – Permitted Facilities and WLAs

Facility	Permit	Water	WLA (cfu/yr)
Virginia Beach	VA0088676	West Neck and London Bridge Creeks	2.60E+13
U.S. Naval Station Oceana	VAR040043	West Neck, London Bridge, Wolfsnare and Great Neck Creeks	1.45E+13

Load Allocations

According to Federal regulations at 40 CFR 130.2(g), load allocations (LAs) are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Wherever possible, natural and nonpoint source loads should be distinguished.

In order to accurately simulate landscape processes and nonpoint source loadings, VADEQ used the HSPF and CE-QUAL-W2 models to represent the impaired watersheds. The HSPF and CE-QUAL-W2 models are comprehensive modeling systems for the simulation of watershed hydrology, point and nonpoint source loadings, and receiving water quality. HSPF and CE-QUAL-W2 models use precipitation data for continuous and storm event simulation to determine total loading to the impaired segments from the various landuses within the watershed. Tables 4a-e list the LAs for impaired segments of the London Bridge Creek, Nawney Creek, Milldam and West Neck Creek. The reductions needed to insure that the instantaneous criteria are attained at all times are extremely stringent.

Table 4a - LA for Bacteria (fecal coliform) for London Bridge and Canal #2

Source Category	Existing Load (cfu/yr)	Proposed Load (cfu/yr)	Percent Reduction
Livestock Access	5.35E+12	6.46E+11	88
Barren	3.09E+13	3.73E+12	88

Commercial	4.38E+12	5.25E+11	88
Cropland	2.24E+13	2.68E+12	88
Pasture	5.93E+13	6.87E+12	88
Residential	5.40E+14	6.51E+13	88
Wetlands	3.34E+13	3.34E+13	0.00
Woodlands	3.22E+13	3.22E+13	0.00
Straight Pipes	1.50E+13	0.00	100
Livestock Direct	0.00	0.00	0.00
Wildlife Direct	3.55E+12	3.55E+12	0.00

Table 4b - LA for Bacteria (fecal coliform) for West Neck Creek (Upper)

Source Category	Existing Load (cfu/yr)	Proposed Load (cfu/yr)	Percent Reduction
Livestock Access	1.27E+13	1.88E+12	85
Barren	1.86E+13	2.78E+12	85
Commercial	1.34E+13	1.98E+12	85
Cropland	6.00E+13	9.09E+12	85
Pasture	1.29E+14	1.94E+13	99
Residential	2.98E+14	4.49E+13	85
Wetlands	1.02E+14	1.02E+14	0.00
Woodlands	5.02E+13	5.02E+13	0.00
Straight Pipes	3.30E+13	0.00	100
Livestock Direct	0.00	0.00	0.00
Wildlife Direct	3.66E+12	3.66E+12	0.00

Table 4c - LA for Bacteria (fecal coliform) for West Neck Creek (Middle)

Source Category	Existing Load (cfu/yr)	Proposed Load (cfu/yr)	Percent Reduction

Livestock Access	1.75E+12	2.09E+11	88
Barren	4.47E+11	5.36E+10	88
Commercial	1.06E+11	1.25E+10	88
Cropland	8.16E+13	9.86E+12	88
Pasture	1.44E+13	1.73E+12	88
Residential	7.06E+13	8.49E+12	88
Wetlands	7.12E+13	7.12E+13	0.00
Woodlands	2.17E+13	2.17E+13	0.00
Straight Pipes	2.00E+13	0.00	100
Livestock Direct	0.00	0.00	0.00
Wildlife Direct	2.03E+12	2.03E+12	0.00

Table 4d - LA for Bacteria (fecal coliform) for Nawney Creek

Source Category	Existing Load (cfu/yr)	Proposed Load (cfu/yr)	Percent Reduction
Livestock Access	5.36E+12	8.14E+11	85
Commercial	1.44E+12	2.17E+11	85
Cropland	3.76E+14	5.67E+13	85
Pasture	5.42E+14	8.16E+12	85
Residential	3.02E+13	4.53E+12	85
Wetlands	6.51E+13	6.51E+13	0.00
Woodlands	9.74E+12	9.74E+12	0.00
Straight Pipes	1.10E+13	0.00	100
Livestock Direct	0.00	0.00	0.00
Wildlife Direct	1.07E+13	1.07E+13	0.00

Table 4e - LA for Bacteria (fecal coliform) for Milldam Creek

Source Category	Existing Load (cfu/yr)	Proposed Load (cfu/yr)	Percent Reduction

Livestock Access	1.36E+12	1.36E+10	99
Commercial	3.07E+09	3.07E+07	99
Cropland	3.65E+13	3.65E+11	99
Pasture	6.31E+12	6.31E+10	99
Residential	4.89E+12	4.89E+10	99
Wetlands	8.27E+13	7.35E+12	91
Woodlands	6.86E+12	6.22E+11	91
Straight Pipes	1.50E+13	0.00	100
Livestock Direct	1.90E+10	0.00	100
Wildlife Direct	2.76E+12	2.76E+12	0.00

3) The TMDLs consider the impacts of background pollution.

The TMDLs consider the impact of background pollutants by considering the bacteria load from background sources like wildlife.

4) The TMDLs consider critical environmental conditions.

According to EPA=s regulation 40 CFR § 130.7 (c)(1), TMDLs are required to take into account critical conditions for stream flow, loading, and water quality parameters. The intent of this requirement is to ensure that the water quality of the impaired segments is protected during times when it is most vulnerable.

Critical conditions are important because they describe the factors that combine to cause a violation of water quality standards and will help in identifying the actions that may have to be undertaken to meet water quality standards[3]. Critical conditions are a combination of environmental factors (e.g., flow, temperature, etc.), which have an acceptably low frequency of occurrence. In specifying critical conditions in the waterbody, an attempt is made to use a reasonable Aworst-case@ scenario condition. For example, stream analysis often uses a low-flow (7Q10) design condition because the ability of the waterbody to assimilate pollutants without exhibiting adverse impacts is at a minimum.

[3]EPA memorandum regarding EPA Actions to Support High Quality TMDLs from Robert H. Wayland III, Director, Office of Wetlands, Oceans, and Watersheds to the Regional Management Division Directors, August 9, 1999.

The HSPF and CE-QUAL-W2 models were run over as annual period that exhibited a wide range of climatic conditions. Ideally these models are run for multi-year periods but 1998 and 1999 had the most robust data set. The allocations developed in the TMDLs will therefore insure that the criterion is attained over a wide range of environmental conditions including wet and dry weather conditions.

5) The TMDLs consider seasonal environmental variations.

Seasonal variations involve changes in stream flow and loadings as a result of hydrologic and climatological patterns. In the continental United States, seasonally high flows normally occur in early spring from snow melt and spring rain, while seasonally low flows typically occur during the warmer summer and early fall drought periods.

Bacteria loadings also change during the year based on crop cycles, waste application rates, and cattle access patterns. Consistent with our discussion regarding critical conditions, the HSPF and CE-QUAL-W2 models and TMDL analysis effectively considered seasonal environmental variations through the use of observed weather data over an extended period of time and by modifying waste application rates, crop cycles, and livestock practices.

6) The TMDLs include a margin of safety.

This requirement is intended to add a level of safety to the modeling process to account for any uncertainty. The MOS may be implicit, built into the modeling process by using conservative modeling assumptions, or explicit, taken as a percentage of the WLA, LA, or TMDL. Virginia included an implicit MOS in the TMDLs through the use of conservative modeling assumptions in the determination of bacteria loadings and production.

7) There is a reasonable assurance that the TMDLs can be met.

EPA requires that there be a reasonable assurance that the TMDLs can be implemented. WLAs will be implemented through the NPDES permit process. According to 40 CFR § 122.44(d)(1)(vii)(B), the effluent limitations for an NPDES permit must be consistent with the assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA. Furthermore, EPA has authority to object to issuance of an NPDES permit that is inconsistent with WLAs established for that point source.

Nonpoint source controls to achieve LAs can be implemented through a number of existing programs such as Section 319 of the CWA, commonly referred to as the Nonpoint Source Program.

8) The TMDLs have been subject to public participation.

Two public meetings were held for Virginia Beach Coastal Area TMDLs (London Bridge Creek, Nawney Creek, Milldam and West Neck Creek). The meetings were held on October 20, 2004 and January 20, 2005. The first meeting was held in VADEQ's Regional Office in Virginia Beach and the second meeting was held at Tidewater Community College. All of the meetings were noticed in the Virginia Register and subject to a 30-day comment period. Comments were received and responded to.